

The Effects of Training in Memory, Cognitive, and Compensation Learning Strategies of Writing in Improving Students' Use of the Strategies: Hawassa University Students in Focus

Author:

Dr. Zeleke Arficho Ayele*

Address For correspondence:
Hawassa University, Hawassa, Ethiopia

Abstract:

The purpose of this research was to examine the effects of training in memory, cognitive, and compensation learning strategies of writing in improving students' use of each of these learning strategies of writing. To this end, the selected Year-I students of Hawassa University were taught lessons of the Basic Writing Skills course with training in each of the three groups of the learning strategies of writing. Data were collected mainly through a pre and post-training five-point scale questionnaire. An interview was also held with selected participants. Paired-Samples T Test was computed to compare the pre and post-training mean scores of the students. The results showed that the training significantly improved the students' use of the learning strategies of writing (t -values ≥ -7.57 , p -values $= .000$). Moreover, results of the interview revealed that the training made the students learn the importance of the strategies to improve their writing skills. Hence, they continued using the strategies appropriately in and outside the class to help them successfully accomplish their writing tasks. Based on the findings, recommendations are made.

Keywords: writing skills; memory; cognitive; compensation; learning strategies of writing; student training

zelekearficho@gmail.com *Corresponding Author E-Mail Id

I. INTRODUCTION AND BACKGROUND

Hawassa University is a public university found in the South Nations, Nationalities, and Peoples' Regional State of Ethiopia; it is a comprehensive university engaged in the provision of all-round education, research, training, and community service. The university has over 64 first degree programs, 43 second degree programs, and 4 PhD programs in various schools/colleges. Students of all the departments of Hawassa University, particularly in the undergraduate studies, as is the case with students of other universities across the nation, take English language courses such as Communicative English Skills-I, Communicative English Skills-II, Sophomore English, Basic Writing Skills, Advanced Writing-I, Advanced Writing-II and/or Report Writing. The main objective of offering the English language courses to the students is to help them improve their proficiency as English is a medium of instruction and nearly all the teaching/learning and reference materials are written in it (Gebremedhin, 1986; Hailemichael, 1993). Written and oral communications as well as meetings within the university, usually, and communications with foreign learning institutions are always carried out in English. Moreover, formal as well as informal notices of the university usually appear in English. Thus, a great deal of information exchange mainly takes place in writing. It is also mainly writing that has been offered to the undergraduate program students of all the schools/colleges of the university.

“Student writing is at the center of teaching and learning in higher education, fulfilling a range of purposes according to the various contexts in which it occurs” (Coffin, et al., 2003, p. 2). In higher education, it is mainly writing that is used as a means to assess students. That is, instructors ask students to write paragraphs or essays in or outside the class as well as make students take written examinations and write laboratory reports in order to evaluate students' achievement of course objectives. Thus, students' success usually depends on their writing skills. In this regard, McWhorter (1996, p. 357) says, “As a general rule, the further you progress in your education, the more writing you will be expected to do.” Moreover, writing at tertiary education is used to facilitate learning. That is to say, instructors make students facilitate their learning through writing diaries, questions, problems, and suggestions on the process of teaching/learning and then, sharing these with someone else (instructors, peers, or others). This increases their reasoning and critique skills, and improves their learning.

1.1 Objectives of the Study

Hawassa University curricula, as is the case with other universities across the nation, have not given room for the issue of training in language learning strategies in general and writing skills in particular. Learning strategies training has roots in cognitivism and humanism learning theories. Training in learning strategies of writing involves asking students to learn writing through receiving strategies training in which explanations are given to the students as to when (contexts), how, and why the strategies can be used (Oxford, 1990). A vast body of research literature on the topic confirms that training in learning strategies of writing improves students' use of the strategies since training makes students learn the role of the strategies to help them improve their writing skills. Hence, they continue using the strategies appropriately when they carry out writing tasks in and outside the class (Dujcik, 2008; Sasaki, 2000). However, so far, nobody has conducted a research at any level of learning in Ethiopian context in order to study this matter. The literature discusses that the perception and practice of training in learning strategies of writing change according to specific cultural and educational contexts. Thus, this study was intended to examine the effects of training in memory, cognitive, and

compensation learning strategies of writing in improving students' use of each of these learning strategies of writing with particular reference to Hawassa University students.

1.2 Research Hypotheses

The following null and alternative hypotheses were formulated about the effects of the training:

Null Hypothesis (H₀): Training in memory, cognitive, and compensation learning strategies of writing does not significantly improve students' use of each of these learning strategies of writing.

Alternative Hypothesis (H_a): Training in memory, cognitive, and compensation learning strategies of writing significantly improves students' use of each of these learning strategies of writing.

1.3 Significance of the Study

The researcher believes that the findings of the present study have the following importance. In the first place, it adds value to the knowledge that training in memory, cognitive, and compensation learning strategies of writing has significant effects in improving students' use of each of these learning strategies of writing. Moreover, the present study may serve as a springboard for future researchers interested to fill in the gaps with regard to whether training in each of the three groups of learning strategies of writing makes significantly different effects on different ability groups of writing, user-groups of the strategies, gender, age, etc. regarding their use of the strategies.

1.4 Scope of the Study

This study did not examine whether training makes significantly different effects on different ability groups of writing, user-groups of the strategies, gender, age, etc. regarding their use of the strategies. The aim was not also to investigate whether training in metacognitive, affective, and social learning strategies of writing significantly improves students' use of each of these learning strategies of writing. Furthermore, the study was delimited to Hawassa University, to which the researcher is a staff, and to Year-I students. According to the existing placement policy, students from across the nation are randomly distributed to the higher learning institutions. Hence, the student population does not vary from one university to another in terms of characteristics such as demography, academic and social background, age, etc. Moreover, Year-I was chosen because getting access to representative sample is possible only here where students of all departments take a writing course.

II. REVIEW OF RELATED LITERATURE

II.1 Learning Strategies of Writing

The memory, cognitive, and compensation learning strategies of writing are as follows according to Oxford (1990), an authority in the area.

II.1.1 Memory Learning Strategies of Writing

Memory strategies of writing include placing new words into a context, using key words, and structured reviewing. Placing new words into a context involves applying words that have been heard or read into a meaningful context as a way of remembering them. For example, learners may make a little story by using the new words. Using key words to remember something requires learners to go through two steps. First, they

should identify a familiar word in their own language that sounds like the new word. Second, they should create an image of some relationship between the new and familiar words. For instance, to learn the French word potage (soup), the English speaker can associate the word with a pot and then draw a pot that is full of potage. Structured reviewing involves carefully spaced intervals, at first close together and then more widely spaced apart. Learners might start, for instance, with a review of fifteen minutes after the initial learning, then twenty-five minutes afterward, an hour or two afterward, a day later, two days later, a week later, etc. so that they can become so familiar with the information and master it.

II.1.2 Cognitive Learning Strategies of Writing

The cognitive strategies of writing are different. Using mechanical techniques involves writing new words on one side of cards and their definitions or full sentences with the words on the other side and then moving the cards from one stack to another when the words are learned. This strategy also includes putting words that have been learned and words that need practice in separate sections of a notebook. Repeating involves writing the same thing twice or more times. For example, when students carry out a piece of writing, they can repeat words or expressions, styles, tones, examples, evidences, etc. to tell us that they are emphasizing these to help them effectively discuss given ideas or concepts. Formally practicing with sounds and writing systems focuses on practicing the writing systems of the target language, for example, by copying letters/words or copying or collecting paragraphs developed by using similar methods in the target and students' own languages to compare and contrast the paragraphs in terms of organization of ideas, subject matter treatment, language use, etc. This helps learners write paragraphs in the target language by effectively applying given methods, for it may be easy to understand about the methods from the paragraphs in their own languages.

According to Oxford (1990), "Recognizing and using routine formulas and patterns in the target language greatly enhance the learner's comprehension and production. Formulas are unanalyzed expressions, while patterns have at least one slot that can be filled with an alternative word" (p. 72). When students carry out writing tasks, to help them maximize the attractiveness of their writing, they can collect, practice and employ commonly used expressions, structures and formats.

The strategy of recombining involves writing new meaningful sentences by arranging together words or expressions in new ways. For instance, a learner can recombine expressions such as going to the warehouse, going to the supermarket, attending a meeting, walking, and going to the cinema and write a little story about a woman who does all these things in the same morning. Practicing naturalistically includes writing autobiography, interviews of family or friends, factual reports, stories, poems, diary, newsletters, magazines, simulated radio and television programs, letters, etc. in the target language.

Using sources for getting information includes using dictionaries, grammar books, reference books, the internet, television news shows, radio programs, etc. to help learners improve their writing regarding word choice, grammar, mechanics, organization, content, etc. Reasoning deductively involves using general rules and applying them to draw specific rules about a language while writing. It is a top-down strategy leading from general to specific. Reasoning deductively is a common and useful type of logical thinking. For example, to write given adverbs in the correct position, learners can use the general rule that adverbs usually appear before

other adverbs, before adjectives, and after verbs they modify. Translating involves using one's own language to prepare the first draft and then changing it into the target language. Writing a draft in one's own language may make him/her easily generate and organize ideas. Transferring involves applying one's grammatical knowledge of first language to second/foreign language or his/her knowledge from one aspect of a language to another aspect or conceptual knowledge from one field to another. For example, students can use this strategy to help them understand or produce the four types of sentences, namely simple, compound, complex and compound-complex which are classified on the basis of grammatical structure. They can apply their knowledge about number and types of clauses (dependent/independent) and about types of coordinating conjunctions and/or punctuation marks of these sentences in their first/Amharic language to help them easily understand or produce sentences in English.

With regard to taking notes as a strategy, learners can take notes on some issues while reading texts in the target language to help them improve their writing skills. For instance, to help them write a similar descriptive essay about their own rooms at home, students can take notes about the uses of the room, its size, decoration, furniture, the size of its window, and how these are paragraphed. Thus, this could help them produce a descriptive essay that discusses all these.

Summarizing as a cognitive learning strategy of writing is making a condensed version of a paragraph or an essay. Writing a summary usually needs concentration. Learners need to apply the following procedures. First, they should identify the main ideas and the major supporting details of the text. Second, they should write the ideas in their own words. Highlighting, another cognitive learning strategy of writing, is using a variety of emphasis techniques such as color underlining, CAPITAL LETTERS, big writing, bold writing, and using symbols to help one focus on such information. For example, learners can highlight the title and the introductory sentence of their paragraphs to help them effectively develop the theme and produce an appropriate concluding sentence respectively. This is because if they highlight these, they might pay attention to these and thus might not deviate from these. Learners can also highlight the topic sentence to help them write adequate and important supporting details. When they highlight the sentence, they can focus on it and thus might not move away from it and therefore can include adequate and appropriate supporting details.

To help them write effective paragraphs or essays, learners can go through the following series of steps: write down the main ideas they will discuss in the essay; arrange the ideas from the least important to the most important; develop the ideas into topic sentences and supporting details; draft the essay of an introductory paragraph, body paragraph/s, and a concluding paragraph; revise the essay; edit the essay by focusing on language and unity, coherence, and adequate development of the ideas and rewrite the essay by improving it.

II.1.3 Compensation Learning Strategies of Writing

Compensation strategies of writing include selecting the topic, adjusting or approximating the message, coining words, and using a circumlocution or synonym. Students can practice writing by choosing topics that interest them; when they select topics, they need to consider their readers' interests, needs, and level of understanding. Adjusting or approximating the intended messages is often used when learners cannot construct the most appropriate sentences. For instance, instead of producing the more difficult sentence I would have liked to have

visited Hawassa, but I could not go because I lacked the necessary funds, they can write I did not go to Hawassa, because I did not have money.

Coining words involves making up new words to communicate the intended ideas for which learners do not have the right words. For instance, learners can use tooth-doctor instead of dentist and paper-holder instead of notebook.

When students write, they can use a circumlocution or a synonym if they could not produce a single word that can accurately reveal the intended concepts/ideas. A circumlocution is a roundabout expression that includes a group of words to express a single concept, and a synonym is a word that has exactly or nearly the same meaning in the same language. For example, if learners cannot think of the word briefcase, they can say leather package that holds papers.

II.2 Approaches to Learning Strategies Training

II.2.1 Narrow Focus, Broad Focus, or Combination Approaches

Oxford (1990), an authority in the area, discusses that learning strategies training can be conducted by a narrow focus, broad focus, or combination approach. A narrow focus approach involves teaching students one or two learning strategies. This approach has the following benefits: first, it makes the trainer cover more learning strategies in short time as only one or two strategies are independently introduced at a time. Second, it minimizes the possibility of confusing students with different types of strategies because the strategies are introduced one by one. Third, a narrow focus allows the instructor to accurately evaluate the effectiveness of training because he/she teaches each strategy separately. However, the downside of this approach is that it does not promote students' language learning because the strategies are not integrated to interact with one another.

A trainer who uses a broad focus approach introduces more learning strategies from all the classification groups. This approach requires a trainer to conduct the training through integrating different types of language learning strategies of each category so that learners notice how the strategies interact with each other. A broad focus approach also improves learners' belief about language learning. According to Oxford (1990), "However, this broad focus does not allow precise assessment of training effectiveness in reference to any specific strategy" (p. 205).

A combination approach is an amalgamation of broad focus and narrow focus approaches. This approach involves some procedures. First, the trainer provides students with all language learning strategies of all the classification groups and asks them to rate the role of the strategies. Second, among strategies reported by students as useful, the trainer chooses strategies that are not too familiar and too strange. Then, a separate or an integrated and an implicit or an explicit training is conducted on the strategies. "This is an excellent way to approach strategy training. It gives learners the "big picture" at first, and then moves into specific strategies which the learners have chosen themselves. The element of learner choice in instructing structuring training is very important, since learning strategies are the epitome of learner choice and self-direction" (Oxford, 1990, p. 205).

II.2.2 Separate versus Integrated Approaches

Learning strategies training can be carried out by a separate or an integrated approach. It is worth noting that a separate approach involves teaching learning strategies without incorporating them into the language lessons. According to O'Malley and Chamot (1990), "Arguments in favor of separate training programs advance the notion that strategies are generalizable to many contexts...and that students will learn strategies better if they can focus all their attention on developing strategic processing skills rather than try to learn content at the same time..." (p. 152). However, according to some scholars such as Oxford (1990), this approach does not enhance students' language learning since students do not receive training on how and when to use strategies and on how to evaluate their learning as well as the success of strategies.

Wenden (1991), O'Malley and Chamot (1990), and Oxford (1990) believe that an integrated approach, unlike a separate approach, requires the trainer to teach strategies by including them into appropriate tasks of a language course. Students are shown when and how to use strategies and how to evaluate the importance of the strategies. O'Malley and Chamot (1990) state, "Those in favor of integrated strategy instruction programs, on the other hand, argue that learning in context is more effective than learning separate skills whose immediate applicability may not be evident to the learner...and that practicing strategies on authentic academic and language tasks facilitates the transfer of strategies to similar tasks encountered in other classes..." (p. 152).

II.2.3 Implicit versus Explicit Approaches

Learning strategies training can be conducted by choosing an implicit or an explicit approach. An implicit approach is an embedded approach. The trainer who chooses this approach sets language tasks intended to make students use learning strategies to help them successfully accomplish the tasks but the trainer does not inform students about the role of the strategies and when and how to use the strategies (O'Malley & Chamot, 1990; Oxford, 1990; Wenden, 1991; Wenden & Rubin, 1987). This approach, according to O'Malley and Chamot (1990) and Oxford (1990), has two merits: first, as the strategies are embedded, it minimizes the risk learners may oppose the training. Second, "An advantage cited for strategy training embedded in instructional materials is that little teacher training is required....As students work on exercises and activities, they learn to use the strategies that are cued by the textbook" (O'Malley & Chamot, 1990, p. 153). On the other hand, this approach has some drawbacks. According to O'Malley and Chamot (1990), it does not make students take on more responsibility for their own learning. Moreover, it does not make learners use strategies flexibly in a variety of contexts and maintain strategies overtime (Wenden & Rubin, 1987).

An explicit approach, unlike an implicit approach, requires the trainer to apply the following procedures: identify language learning strategies by name, explain/describe the importance of the strategies, demonstrate (through actual language tasks) in which contexts to use and how to use the strategies, and how to transfer the strategies into other contexts, make students practice the strategies, and ask students to evaluate the importance of the strategies in improving their language performance. With regard to this approach, Chamot (2005, p. 123) writes, "Explicit instruction includes the development of students' awareness of their strategies, teacher modeling of strategic thinking, identifying the strategies by name, providing opportunities for practice and self-evaluation." According to Wenden and Rubin (1987), an explicit approach helps learners maintain strategies

over time for a variety of learning contexts; this approach also makes students take on more responsibility for their own learning. In Oxford's (1990, p. 201) language, "the general goals of such training are to make language learning more meaningful, to encourage a collaborative spirit between learner and teacher, to learn about options for language learning, to learn and practice strategies that facilitate self-reliance."

II.3 Procedures for Conducting a Learning Strategies Training Lesson

There are several models suggested for conducting a language learning strategies training lesson (Chamot & Kupper, 1989; Grenfell & Harris, 1999; Hosenfeld et al., 1981; Oxford, 1990; Wenden, 1991). Oxford (1990) writes that the instructor of a language learning strategies training lesson has to follow the following procedures: ask learners to do an activity without strategy training, ask learners if they use any strategy while doing the activity, and ask them to evaluate the role of the strategy (if used), suggest and explain some useful strategies and the rationale for using the new strategies, ask learners to practice the strategies by doing the task again or through other language tasks, show how to transfer the strategies to new learning tasks, ask learners to practice the strategies in new learning tasks, ask learners to evaluate the importance of the strategies used, i.e., if they find the strategies useful for helping them successfully accomplish writing tasks.

III. METHODOLOGY

III. 1 Research Approach

This study was meant to examine whether training in memory, cognitive, and compensation learning strategies of writing significantly improves students' use of each of these learning strategies of writing. To this end, the selected Year-I students of Hawassa University were taught lessons of the Basic Writing Skills course with training in each of the three groups of learning strategies of writing. The effects of the training were examined by hypothesis testing. An interview was also held with selected participants, and focus was given to explore students' feelings about the training in improving their use of the learning strategies of writing. Thus, this study employed a mixed-methods design. Muijs (2004, p. 11) discusses the following in this respect: "Many researchers take a pragmatic approach to research and use quantitative methods when they are looking for breadth, want to test a hypothesis or want to study something quantitative. If they are looking for depth and meaning, they will prefer to use qualitative methods".

III.2 Preparation of Teaching Material

Based on the course syllabus, a teaching material on Basic Writing Skills course was prepared by choosing **combination, integrated, and explicit approaches** discussed earlier. The teaching material was prepared by the model of Oxford (1990). First, her model was chosen because it is the most suitable model; it has been preferred by many researchers. Second, the model briefly discusses procedures that are easy to understand. In the teaching material, the students were asked to make use of the learning strategies of writing while completing sentences by writing appropriate subjects and predicates of their own and rewriting sentences by correcting errors, completing paragraphs by writing appropriate topic sentences, concluding sentences and relevant details, rearranging jumbled sentences in logical orders, and completing paragraphs by writing appropriate cohesive devices. Comments were obtained from most senior colleagues of the researcher so as to validate the teaching material.

III.3 Selection of Study Setting, Department and Students

The researcher purposefully chose Hawassa University to which he is a member of staff. From the existing departments of the university, Management Department (a total of 82 students) was randomly selected by drawing lots. The researcher used a simple random sampling because it allows a department and a student to have equal chance of being selected. Thus, it is possible to be confident that the department and the students chosen represent all the departments and students of the university respectively.

III.4 Preparation of Questionnaire

A questionnaire was adapted from Oxford (1990) and included items where each item had five possible responses: always, usually, sometimes, rarely and never. The questionnaire was intended to collect data on students' use of memory, cognitive, and compensation learning strategies of writing. Most senior colleagues of the researcher were requested to comment on the questionnaire regarding content validity, face validity and clarity of the items. Cronbach's alpha was also computed on SPSS (Statistical Package for the Social Sciences) version 20 to examine the reliability of the items of the questionnaire. The computation showed that the items of the questionnaire were reliable at above 0.71. Cronbach's alpha was chosen because the questionnaire was in a five-point scale.

III. 5 Preparation of Interview

A semi-structured interview was prepared in English for the students. It was intended to investigate the students' feelings about the training in improving their use of the learning strategies of writing. A semi-structured form was chosen because, first, it has the characteristics of both structured and unstructured interview, each with its strengths. Second, data obtained through such interview are not difficult to categorize and interpret. Care was taken concerning language issues and sequencing of questions while preparing the interview.

III.6 Administration of Pre-training Questionnaire

Before the students were made to practice the writing tasks by receiving training on each of the three groups of learning strategies of writing, a questionnaire was administered to collect data on the students' use of the learning strategies of writing. The questionnaire was filled in by 37 students (out of 41) and collected back. Careful attempts were made to make the environment conducive to fill in the questionnaire.

III. 7 Administration of Post-training Questionnaire

The same questionnaire was administered after conducting the training for half a semester (5 hours a week for 8 consecutive weeks). Careful attempts were made to make the environment conducive to fill in the questionnaire. The questionnaire was filled in by all the subjects (37) who had filled in the pre-training questionnaire. The purpose of administering the questionnaire after the training was to gather data on the students' use of each of the three groups of learning strategies of writing so that it would be possible to examine if the training in the learning strategies of writing had significant effects in improving the students' use of the strategies.

III.8 Conducting Interview

After administering the post-training questionnaire, an interview was held with 10 selected participants in order to explore their feelings about the training in improving their use of the learning strategies of writing. Careful attempts were made to make the environment conducive for the interview. Furthermore, the researcher took care of his pronunciation and pace while interviewing the students. Moreover, the interview sessions were interactive as well as tape-recorded.

IV. DATA ANALYSIS, DISCUSSION, AND RESULTS

IV.1 Analysis of the Results of the Questionnaire

Results of the questionnaire were analyzed by SPSS version 20 in order to examine if the training in memory, cognitive, and compensation learning strategies of writing significantly improved the students' use of each of the three groups of the learning strategies of writing. The procedures used by prominent social science researchers like Barteau, 2009; Evans, 2007; Hong et al., 2003; Knowles and Kerkman, 2007; Prokop et al., 2007, etc. were applied so as to analyze the data. First, the items of the questionnaire were categorized into the three groups of the learning strategies of writing.

Second, for the pre and post-training questionnaire separately, values 1 to 5 were given for never, rarely, sometimes, usually, and always respectively so that the minimum score a student would score was the number of the items of a group multiplied by 1, and the maximum score a student would score was the number of the items of a group multiplied by 5.

Third, histograms were produced for the students' pre and post-training scores on each of the three groups of the learning strategies of writing to see if the distributions had the shape of the cross-section of a bell where many of the scores were closer to the mean scores. In this regard, Connolly (2007, p. 46) says "Overall the histogram is a good chart to use when displaying the characteristics of a single scale variable as it is simple to understand and is able to display the shape and distribution of the data very clearly and accessibly".

Fourth, Paired-Samples T Test was computed on SPSS version 20 to examine if there was a significant difference between the students' pre and post-training use of each of the three groups of the learning strategies of writing. According to Voelker et al. (2001), "This t-test compares one set of measurements with a second set from the same sample. It is often used to compare "before" and "after" scores in experiments to determine whether significant change has occurred" (p. 88). The significance level was taken at .05. T Tests indicate that there is a significant difference (if any) but do not show the magnitude of the effects. For that reason, effect sizes were calculated. "There are a wide variety of effect size measures around but the one we use in conjunction with the t-test is called Cohen's d" (Muijs, 2004, p. 136). According to Cohen (1988), the following guidelines are suggested for determining the effect sizes: 0–0.20 = weak effect; 0.21–0.50 = modest effect; 0.51–1.00 = moderate effect; >1.00 = strong effect (as cited in Muijs, 2004, p. 139).

IV.2 Analysis of the Interview Results

The following steps were used to analyze the interview results: first, the data were transcribed. Then, similar responses of each question of the interview were categorized together in themes. Lastly, the results were discussed and implications were drawn according to the views of the majority of the participants.

IV.3 Results of the Paired-Samples T Test

The following table shows the results of the Paired-Samples T Test.

	Pre-training			Post-training			DF	T-value	P-value	Significance
	N	Mean	Std. Deviation	N	Mean	Std. Deviation				
Memory Strategies	37	2.75	.98	37	4.10	.73	36	-7.57	.000	Significant
Cognitive Strategies	37	31.24	6.07	37	47.51	6.57	36	-14.32	.000	Significant
Compensation Strategies	37	8.56	2.32	37	12.24	2.54	36	-9.53	.000	Significant

The above table shows that the pre-training has the mean score of 2.75, whereas the post-training has the mean score of 4.10 with regard to students' use of memory strategies. The calculated standard deviation of the pre-training is shown as .98 but the calculated standard deviation of the post-training is shown as .73. The t-value is revealed as -7.57, and the p-value is shown as .000. This indicates that the difference between the pre and post-training mean scores of the students as to their use of memory strategies is significant (t-value > table value, p-value < .05). To be precise, after the training, the students significantly improved their use of memory strategies of writing. Cohen's d = 1.58; it shows the effect size is strong.

Moreover, the above table reveals that the mean score of the pre-training is 31.24, whereas the mean score of the post-training is 47.51 concerning the students' use of cognitive strategies. The calculated standard deviations are shown as 6.07 and 6.57 for the pre and post-trainings respectively. The table indicates that the t-value is -14.32, and that of the p-value is .000. Therefore, there is a significant difference between the students' pre and post-training mean scores regarding their use of cognitive strategies. After the training, the students

significantly improved their use of cognitive strategies of writing ($t\text{-value} > \text{table value}$, $p\text{-value} < .05$). Cohen's $d = 2.57$; it shows the effect size is strong.

Furthermore, regarding the students' use of compensation strategies, the above table shows that the pre-training has the mean score of 8.56, whereas the post-training has the mean score of 12.24. The standard deviation of the pre-training is 2.32 but the standard deviation of the post-training is 2.54. It is revealed that the $t\text{-value}$ is -9.53 and that of the $p\text{-value}$ is .000. This shows that the pre and post-training mean scores as to the students' use of compensation strategies are significantly different ($t\text{-value} > \text{table value}$, $p\text{-value} < .05$). That is to say, the students significantly improved their use of compensation strategies of writing after they had received the training. Cohen's $d = 1.51$; it shows the effect size is strong.

The results of the Paired-Samples T Test correspond with the results of the interview in which the participants unanimously responded that learning the writing lessons through receiving training on the learning strategies of writing improved their use of the strategies. These results are in line with the findings of Dujcik (2008) and Sasaki (2000) who found that strategies-based instruction significantly improves students' use of the strategies.

IV.4 Results of the Interview

The results of the interview are discussed as follows: first, the interviewees were asked if training in the learning strategies of writing made them learn about the importance of the strategies. Accordingly, all of them responded that the training helped them know about the importance of the strategies. The interviewees discussed this in terms of the benefits they got from learning the writing lessons in that way. First, they said that learning the lessons in the context of the training made them learn how the strategies were useful to improve their writing skills. Hence, they could significantly improve their writing skills. Second, they reported that the training made them like to practice writing.

Afterward, the interviewees were asked if learning the writing lessons through receiving training on the learning strategies of writing made them know when and how to use the strategies. They responded that the training helped them know when and how to use the strategies. To be specific, they learned how to use the strategies whenever they faced problems while carrying out writing tasks such as paragraphs or essays, short messages, letters, assignments, class work, curriculum vitae, proposals, diary, etc. Moreover, they could be able to know how to use the strategies to help them successfully accomplish various writing tasks.

Furthermore, the participants were asked if training in the learning strategies of writing made them maintain the strategies overtime. All the interviewees replied that the training helped them practice using the strategies whenever they carried out various writing tasks in or outside the class. First, they could continue using the strategies because the training helped them learn how the strategies significantly improved their writing skills. Second, they would maintain the strategies overtime as the lessons were interesting in comparison with the methods used to teach them writing lessons so far.

Moreover, the participants were asked if they used the learning strategies of writing to help them successfully accomplish various writing tasks in or outside the class. The interviewees responded that they continued using the strategies when they did various writing tasks. They could learn when (situations) and how to use the

strategies as well as appropriately used the strategies when they studied, did class works, home works, project works, and took tests/examinations. The participants could strive to do so because the training had made them improve their writing skills and attitude towards practicing writing.

To sum up, majority of the interviewees responded that learning the writing lessons through receiving training on the learning strategies of writing made them learn how the strategies were useful to improve their writing skills; they enjoyed learning the lessons in that way. Therefore, they continued making use of the strategies in various contexts appropriately in or outside the class in order to help them successfully accomplish their writing tasks. These results are in line with the results of the above questionnaire in which after learning the writing lessons through training in the learning strategies of writing, the students significantly improved their use of the strategies.

IV.5 Major Findings of the Study

The Paired-Samples T Test was computed to compare the pre and post-training mean scores of the students with regard to using memory, cognitive, and compensation learning strategies of writing. It revealed that the learners significantly improved their use of each group of learning strategies of writing after the training (t-values > -10.72, p-values=.000). The results of the interview also indicated that the students thought that the training improved their use of the learning strategies of writing. As a result, they continued to use the strategies appropriately in and outside the class in order to help them successfully accomplish their writing tasks.

V. CONCLUSION

This study concludes that training students in memory, cognitive, and compensation learning strategies of writing significantly improves their use of each group of learning strategies of writing since training increases students' awareness about the role of the strategies in improving their writing skills in and outside the class.

VI. RECOMMENDATIONS

The following recommendations are made based on the findings of this study:

- Writing lessons need to be presented in the context of training students in each of the three groups of learning strategies of writing. As a result, students can improve their use of the strategies to help them improve their writing skills.
- Studies have to be conducted to examine if training in each of the three groups of learning strategies of writing makes significantly different effects on different ability groups of writing, user-groups of the strategies, gender, age, etc. regarding their use of the strategies.

REFERENCES:

1. Barteau, P. (2009). Measuring Students' Attitudes toward E-Learning: A Case Study. *E-Learning and Software for Education*, 6(4), 1-8.
2. Chamot, A. (2005). Language Learning Strategy Instruction: Current Issues and Research. *Annual Review of Applied Linguistics*, 25 (6), 112-130.
3. Chamot, A. and Kupper, L. (1989). Learning Strategies in Foreign Language Instruction. *Foreign Language Annals*, 22(1), 13-24.
4. Coffin, C. et al. (2003). Teaching Academic Writing: A Toolkit for Higher Education. London: Routledge.
5. Connolly, P. (2007). Quantitative Data Analysis in Education: A Critical Introduction Using SPSS. New York: Routledge.
6. Dujsik, D. (2008). The Effect of Pre-Writing Strategy Training Guided by Computer-based Procedural Facilitation on ESL Strategy Use, Writing Quantity, and Writing quality. Unpublished PhD Dissertation. University of South Florida: USA.
7. Evans, B. (2007). Students' Attitudes, Conceptions, Achievement in Introductory Undergraduate Statistics. *The Mathematics Educator*, 17(2), 24-30.
8. Gebremedhin, S. (1993). Individualized Reading for E.A.P for Social Science First Year Students in Addis Ababa University. Unpublished PhD Dissertation. Addis Ababa University: Addis Ababa.
9. Grenfell, M. and Harris, V. (1999). Modern Languages and Learning Strategies: In Theory and Practice. London: Routledge.
10. Hailemichael, A. (1993). Developing a Service English Syllabus to Meet the Academic Demands and Constraints in Ethiopian University Context. Unpublished PhD Thesis. Addis Ababa University: Addis Ababa.
11. Hong, K. et al. (2003). Students' Attitudes toward the use of the Internet for Learning: A Study at a University in Malaysia. *Educational Technology & Society*, 6(2), 45-49.
12. Hosenfeld, C. et al. (1981). Second Language Reading: a Curricular Sequence for Teaching Reading Strategies. *Foreign Language Annals*, 14(5), 415-22.
13. Knowles, E and Kerkman, D. (2007). An Investigation of Students' Attitude and Motivation toward Online Learning. *Student Motivation*, 2 (1), 15-33.
14. McWhorter, K. (1996). Study and Critical Thinking Skills in College (Third Edition). New York: Harper Collins College Publishers.
15. Muijs, D. (2004). Doing Quantitative Research in Education with SPSS. London: Sage Publications Ltd.
16. O'Malley, J. and Chamot, A. (1990). Learning Strategies in Second Language Acquisition. Cambridge: Cambridge University Press.
17. Oxford, R. (1990). Learning Strategies in Second Language Acquisition. Cambridge: Cambridge University Press.
18. Prokop, P. et al. (2007). Slovakian Students' Attitudes toward Biology in European Journal of Mathematics. *Science and Technology Education*, 3(4), 287-295.

30. Sasaki, M. 2000). Toward an Empirical Model of EFL Writing Processes: an Exploratory
31. Study. *Journal of Second Language Writing*, 9(3), 259-91.
32. Voelker, D. et al. (2001). *Cliffs Quick Review Statistics*. New York: Hungry Minds.
33. Wenden, A. and Rubin, J. (1987). *Learner Strategies in Language Learning*. New York: Prentice Hall.
34. Wenden, A. (1991). *Learner Strategies for Learner Autonomy: Planning and Implementing*
35. *Learner Training for Language Teachers*. New York: Prentice Hall.